

Complete and Annotated Bibliography of Kit Fine. Writings 1996-2010

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First Part: [Kit Fine and the Ontology of Modal Actualism \(Writings 1970-1995\)](#)

BIBLIOGRAPHY

1. Transfer theorems for multimodal logics. In *Logic and reality: essays on the legacy of Arthur Prior*. Edited by Copeland Jack. Oxford: Oxford University Press 1996. pp. 169-214
Co-author: Schurz Gerhard
2. "Mixing matters," *Ratio* 11: 278-288 (1998).
Reprinted in: David Oderberg - *Form and matter. Themes in contemporary metaphysics* - Oxford, Blackwell. 1999 pp. 65-75.

"Aristotle raised a puzzle about the possibility of mixing whose solution is by no means obvious. I here explicate his solution to the puzzle and attempt to make it plausible within the context of his thought. Although we now know that his specific views on mixing were mistaken, his discussion of the topic raises questions concerning the role of capacities and the relationship of part to whole that are still of interest."

3. "Cantorian abstraction: a reconstruction and defense," *Journal of Philosophy* 95: 599-634 (1998).

"In what follows I shall concentrate on the views of Cantor, though it should be clear how what I say will can be modified to apply to the views of Dedekind. I have not attempted to capture all of the nuances or tensions in Cantor's thought but merely to develop what I take to be its spirit, or central idea. And in developing this idea, I have been guided more by what the idea itself requires than by Cantor's own writings.

The plan of the paper is as follows. I begin by setting out what appear to be decisive objections to the Cantorian account. I then show how these objections can be overcome by making use of the theory of arbitrary objects developed in my book '*Reasoning with Arbitrary Objects*' [Chapter] VII. The relevant parts of the theory are outlined in section 2; and the application to Cantor's account of number is made in section 3. I show, in section 4, how the approach may be extended to order types and to structure types in general. In the final two sections, I first compare the Cantorian approach to abstraction with the standard approaches of von Neumann and Zermelo, on the one side, and of Russell and Frege, on the other; and I then consider to what extent the Cantorian approach is capable of yielding a structuralist conception of number and order type. In a formal appendix, I briefly indicate how the present theory might be formalized within an extension of ZF[Zermelo-Frankel]."

4. The limits of abstraction. In *The philosophy of mathematics today*. Edited by Schirn Matthias. Oxford: Oxford University Press 1998. pp. 503-630
Papers from a conference held in Munich from June 28 to July 4, 1993

5. "Things and their parts," *Midwest Studies in Philosophy* 23: 61-74 (1999).
6. "Semantics for the logic of essence," *Journal of Philosophical Logic* 29: 543-584 (2000).
 "This paper provides a possible worlds semantics for the system of the author's previous paper *The Logic of Essence*. The basic idea behind the semantics is that a statement should be taken to be true in virtue of the nature of certain objects just in case it is true in any possible world compatible with the nature of those objects. It is shown that a slight variant of the original system is sound and complete under the proposed semantics."
7. "Neutral relations," *The Philosophical Review* 109: 1-33 (2000).
 "I argue for a nonstandard account of relations according to which their application is given, not by the order of the relata, but by the role of the relata within the resulting states of affair."
8. "A counter-exemple to Locke's thesis," *The Monist* 83: 357-361 (2000).
9. The question of realism. In *Individuals, essence and identity. Themes of analytic metaphysics*. Edited by Bottani Andrea, Carrara Massimiliano, and Giarretta Pierdaniele. Dordrecht: Kluwer 2002. pp. 3-48 "My aim in this paper is to help lay the conceptual and methodological foundations for the study of realism. I come to two main conclusions: first, that there is a primitive metaphysical concept of reality, one that cannot be understood in fundamentally different terms; and second, that questions of what is real are to be settled upon the basis of considerations of ground. The two conclusions are somewhat in tension with one another, for the lack of a definition of the concept of reality would appear to stand in the way of developing a sound methodology for determining its application; and one of my main concerns has been to show how the tension between the two might be resolved. The paper is in two main parts. In the first, I point to the difficulties in making out a metaphysical conception of reality. I begin by distinguishing this conception from the ordinary conception of reality (1) and then show how the two leading contenders for the metaphysical conception -- the factual and the irreducible--both appear to resist formulation in other terms. This leads to the quietist challenge, that questions of realism are either meaningless or pointless (4); and the second part of the paper (5-10) is largely devoted to showing how this challenge might be met. I begin by introducing the notion of ground (5) and then show how it can be used as a basis for resolving questions both of factuality (6-7) and of irreducibility (8-9). I conclude with some remarks on the essential unity of these two questions and of the means by which they are to be answered (10)." p. 3
10. *The limits of abstraction*. Oxford: Oxford University Press 2002.
 Contents: Preface V-VI; Introduction IX-X; 1. Philosophical introduction 1; 2. The Context Principle 55; 3. The analysis of acceptability 101; 4. The general theory of abstraction 165, References 193; Main Index 197; Index of first occurrences of formal symbols and definitions 200-203.
11. The varieties of necessity. In *Conceivability and possibility*. Edited by Gendler Tamar Szabo and Hawthorne John. Oxford: Oxford University Press 2002. pp. 253-282
 "Necessity abounds. There are the necessary truths of logic, mathematics and metaphysics, the necessary connections among events in the natural world, the necessary or unconditional principles of ethics, and many other forms of necessary truth or connection. But how much diversity is there to this abundance?
 Are all necessary truths and connections reducible to a single common form of necessity? And if not, then what are the different ways in which a truth might be necessary or a necessary connection might hold?
 It is the aim of this paper to show that diversity prevails.
 I shall argue that there are three main forms of necessity - the metaphysical, the natural and the normative - and that none of them is reducible to the others or to any other form of necessity. Thus what it is for a necessity or possibility of any of these forms to obtain does not consist in the obtaining of some other form or forms of necessity or possibility.
 Although the focus of the paper falls squarely within the philosophy of modality, some of my arguments may be of broader interest. For certain currently fashionable views on scientific essentialism and ethical naturalism entail the collapse of forms of necessity that I would wish to keep distinct. Thus I have found it essential to indicate what it is in these views that I take to be in error; and this has required consideration of questions from within the metaphysics of natural kinds

and the epistemology of ethical belief."

12. The problem of possibilia. In *The Oxford Handbook of Metaphysics*. Edited by Loux Michael and Zimmerman Dean. Oxford: Oxford University Press 2003. pp. 161-179

"Are there, in addition to the various actual objects that make up the world, various possible objects? Are there merely possible people, for example, or merely possible electrons, or even merely possible kinds?

We certainly talk as if there were such things. Given a particular sperm and egg, I may wonder whether that particular child which would result from their union would have blue eyes.

But if the sperm and egg are never in fact brought together, then there is no actual object that my thought is about.(1) Or again, in the semantics for modal logic we presuppose an ontology of possibilia twice over.(2) For first, we countenance various possible worlds, in addition to the actual world; and second, each of these worlds is taken to be endowed with its own domain of objects.

These will be the actual objects of the world in question, but they need not be actual simpliciter, i.e., actual objects of *our* world. What are we to make of such discourse? There are four options:

(i) the discourse is taken to be unintelligible; (ii) it is taken to be intelligible but nonfactual, i.e. as not in the business of stating facts; (iii) it is taken to be factual but reducible to discourse involving no reference to possibilia; (iv) it is taken to be both factual and irreducible.(3) These options range from a full-blooded form of actualism at one extreme to a full-blooded form of possibilism at the other. The two intermediate positions are possibilist in that they accept the intelligibility of possibilist discourse but actualist in that they attempt to dispense with its prima facie commitment to possibilia. All four positions have found advocates in the literature. Quine, in his less irenic moments, favours option (i); Forbes ([85], p. 94) advocates option (ii), at least for certain parts of possibilist discourse; many philosophers, including Adams [74] and myself, opt for (iii); while Lewis [86] and Stalnaker [75] have endorsed versions of (iv), that differ in how full-blooded they take the possible objects to be.

My focus in the present article is on the third option. I wish to see to what extent reference to possibilia might be understood in other terms. Can we regard talk of possibilia as a mere *façon de parler*, perhaps somewhat in the same manner as talk of the average man or of infinitesimals? (4) I shall not be concerned to argue directly against any of the other options.

However, any argument for the viability of (iii) is indirectly an argument against the plausibility of these other options.

For (iv), especially in its more extreme forms, offends against what Russell has called our 'robust sense of reality', (i) offends against our even more robust sense of what is intelligible, while (ii) offends against our somewhat less robust sense of what is factual. It is therefore preferable to go with the third option, if we possibly can."

(1) Cf Gupta ([80], 20, n.15).

(2) See Kripke [63] for a standard exposition of the semantics.

(3) See Fine [01] for a general discussion of what these various options amount to.

(4) As should be clear from Fine [01], the viability of any reduction will also depend upon its success in accounting for our understanding of modal discourse and our knowledge of modal truth. See Peacocke [01] for a broader discussion along these lines.

Fine K., [01] 'The Question of Realism', to appear in Imprint. [see Fine 2002]

Gupta A., [80] 'The Logic of Common Nouns', Yale University Press, 20n.

Kripke S., [63] 'Semantical Considerations on Modal Logic', *Acta Philosophica Fennica* 16, 83-94, reprinted in 'Reference and Modality' (ed. L. Linsky), Oxford: Oxford Univ. Press, 1971.

Peacocke C., [01] 'Principles for Possibilia', to appear. [*Noûs*, vol. 36, 2002, pp. 486-508]

13. "The non-identity of a thing and its matter," *Mind* 112: 195-234 (2003).

"Many philosophers have thought that a material thing is, or may be, one and the same as its matter - that a statue, for example, may be the same as the clay from which it is made or a river the same as the water which flows through it. There appears to be a powerful argument against such views, for the thing in each of these cases would appear to have properties not possessed by its matter. Thus the clay of a statue may exist even though the statue itself has ceased to exist and the river

may be composed of different water at different times even though this cannot be true of the water that composes it at any given time. However, these philosophers have responded to this argument by claiming that the apparent difference in properties represents, not a difference in the objects themselves, but a difference in the descriptions under which they may be conceived. We may conceive of a given thing as a statue or some clay or as a river or a body of water, for example, and, depending upon how the object is conceived, we will say one thing about it rather than another. It is the aim of this paper to show that this counter-response cannot be sustained and that the original argument against identity should therefore be allowed to stand. This is no easy task since there would appear to be nothing in the immediate linguistic data to settle the question one way or the other.

However, by working through the consequences of the counter-response for the rest of our language, I think it may be shown to be extremely implausible. The paper is in two main parts. The first (1-4) is largely concerned with setting up the problem. We characterize the different forms the identity theory can take (1), explain how the argument in favor of non-identity might in principle break down (2), present the most plausible versions of such arguments (3), and then consider the most plausible counter-response to them (4). The second part (5-8) embarks on a detailed investigation of the difficulties with the counter-response. It is shown to be unable to account for a wide variety of different linguistic data, that is loosely classified according as to how reference to a material thing might be achieved. Four main kinds of case will be considered: those in which a sort is explicitly invoked (5); those in which it is implicitly invoked (6); those in which the very notion of reference is itself used in securing reference (7); and those in which there is reference to a plurality of things (8)."

14. "The role of variables," *Journal of Philosophy* 50: 605-631 (2003).

Reprinted in the *Philosopher's Annual* 2003; revised in Joseph Almog, Paolo Leonardi (eds.) - *The philosophy of David Kaplan* - New York, Oxford University Press, 2009 pp. 109-133.

"It is generally supposed - by logicians and philosophers alike - that we now possess a perfectly good understanding of how variables work in the symbolism of logic and mathematics.

Once Frege had provided a clear syntactic account of variables and once Tarski had supplemented this with a rigorous semantic account, it would appear that there was nothing more of significance to be said. It seems to me, however, that this common view is mistaken. There are deep problems concerning the role of variables that have never been properly recognized, let alone solved, and once we attempt to solve them we see that they have profound implications not only for our understanding of variables but also for our understanding of other forms of expression and for the general nature of semantics.

It is my aim in the present lecture to explain what these problems are and how they are to be solved. I begin with an antimony concerning the role of variables which I believe any satisfactory account of our understanding of them should solve (1). I then argue that the three main semantical schemes currently on the market - the Tarskian, the instantial and the algebraic - are unsuccessful in solving the puzzle (2-3) or in providing a satisfactory semantics for first-order logic (4-5). Finally, I offer an alternative scheme that it is capable of solving the antimony (6) and of providing a more satisfactory semantics for first-order logic (7). It is based upon a new approach to representational semantics, which I call semantic relationism; and in the remaining three lectures, I will discuss the implications of this approach for the semantics of names and belief-reports."

15. *Modality and tense. Philosophical papers*. New York: Oxford University Press 2005.

Contents: Preface; Introduction 1; I. Issues in the philosophy of language; 1. Reference, essence, and identity 19; 2. The problem of *De Re* modality 40; 3. Quine on quantifying in 105; II. Issues in ontology; 4. Prior on the construction of possible worlds and instants 133; 5. Plantinga on the reduction of possibilist discourse 176; 6. The problem of possibilities 214; III. Issues in Metaphysics; 7. The varieties of necessity 235; 8. Tense and reality 261; 9. Necessity and non-existence 321; IV. Reviews; 10. Review of *Counterfactuals* by David Lewis 357; 11. Review of *The nature of necessity* by Alvin Plantinga 366; References 371; Index 379-387.

16. "Replies," *Philosophical Studies* 122: 367-395 (2005).

Replies to critics about *The limits of abstraction*

17. "Precis," *Philosophical Studies* 122: 305-313 (2005).

Of The limits of abstraction

18. "Class and membership," *Journal of Philosophy* 102: 547-572 (2005).

19. "The reality of tense," *Synthese* 150: 399-414 (2006).

"Is reality somehow tensed? Or is tense a feature of how we represent reality and not properly a feature of reality itself? Although this question is often raised, it is very hard to say what it comes to. For both sides to the debate can agree to certain tensed claims. They can agree that I am sitting right now, for example, or that Queen Ann is dead. So in a clear and obvious sense there are tensed facts. And so how can it sensibly be denied that reality is tensed?

My own view is that the question can only be made clear by drawing a distinction between how things are (*mere* reality) and how things are in reality (*metaphysical* reality). Thus what the antirealist about tense wishes to dispute is not how things are, which should be common ground between him and his opponent, but how things are in reality. Of course, he will say, Queen Ann is dead but this representation of the facts is not faithful to how things are in reality; and this is so, not because of the reference to Queen Ann or to her being dead, but because of the tense. In a faithful representation of how things are in reality, there will be nothing that corresponds to our use of tense.

(1)"

(1) I have in mind that there is a sentential operator 'in reality, ___' by means of which the various realist claims are to be made (Fine [*Questions of reality*]). This paper should be regarded as a summary of views which are elaborated at much greater length in Fine ['Tense and Reality', in 'Papers on Modality and Tense',] and I have made no attempt to engage with the extensive literature on the topic.

20. Our knowledge of mathematical objects. In *Oxford studies in epistemology. Vol. 1*. Edited by Gendler Tamar Szabo and Hawthorne John. Oxford: Clarendon Press 2006. pp. 89-110

"I have recently been attempting to provide a new approach to the philosophy of mathematics, which I call 'procedural postulationism'. It shares with the traditional form of postulationism, advocated by Hilbert and Poincare, the belief that the existence of mathematical objects and the truth of mathematical propositions are to be seen as the product of postulation.

But it takes a very different view of what postulation is. For it takes the postulates from which mathematics is derived to be imperatival, rather than indicative, in character; what is postulated are not propositions true in a given mathematical domain, but procedures for the construction of that domain.

This difference over the cognitive status of postulates has enormous repercussions for the development and significance of the postulational view. The philosophy of mathematics is faced with certain fundamental problems. How are we capable of acquiring an understanding of mathematical terms? How do we secure reference to mathematical objects? What is the nature of these objects? Do they exist independently of us or are they somehow the products of our minds? What accounts for the possibility of applying mathematics to the real world? And how are we capable of acquiring knowledge of mathematical truths? The procedural version of postulationism, in contrast to the propositional version, appears to be capable of providing plausible answers to each of these questions. By going procedural, we convert a view that has appeared completely untenable to one that is worthy of serious consideration.

In what follows I shall focus on the last question concerning our knowledge of mathematics (although this will inevitably involve the other questions). I do this, not because this question is the most interesting or even because it provides the most convincing illustration of the value of our approach, but because it helps to bring out what is most distinctive - and also most problematic - about the approach. If one can go along with what it recommends in this particular case, then one is well on the way to accepting the view in its entirety.

As with the 'big three' traditional approaches to the philosophy of mathematics - logicism, formalism, and intuitionism - the present one rests upon a certain technical program within the foundation of mathematics. It attempts to derive the whole of mathematics - or a significant part thereof - within the limitations imposed by its underlying philosophy. Since the interest of the underlying philosophy largely depends upon the possibility of carrying out such a program, it will be helpful to give a sketch - if only in the barest form - of what the program is and of how it is to be

executed. In this way, one may acquire a more concrete understanding of what the philosophical issues are and of why they might matter."

21. Modal logic and its application. Moschovakis Yiannis. EOLSS survey of mathematical logic 2006.
 22. "Arguing for non-identity: a response to King and Frances," *Mind* 115: 1059-1082 (2006).

"Jeffrey King and Bryan Frances are both critical of my paper, 'The Nonidentity of a Thing and its Matter' (Fine 2003), though in rather different ways. King engages in carpet bombing; his aim is to destroy every argument in sight, even to the extent of showing that the linguistic data cited by the paper favours the monist rather than the pluralist. Frances, by contrast, engages in strategic warfare; by 'taking out' certain key arguments, he attempts to demolish the paper as a whole.

I remain unmoved -- and, I hope, unscathed -- by their attacks.

King's carpet bombing may cause a great deal of collateral damage but not to its intended target; and Frances's strategic bombing may hit its target but without inflicting much harm. Still, their papers raise many interesting issues not discussed -- or, at least, not properly discussed -- in my original paper; and I am grateful to them for providing me with the opportunity to take these issues into account.

My response will be in three main parts: I begin by outlining the central line of argument of my original paper (Sect. 1); I then discuss King's criticisms of the paper (Sects 2, 3, 4); and finally I turn to Frances's criticisms (Sect. 5). I have tried to make my response reasonably self-contained and to bring out the independent significance of the issues under discussion but it would be helpful, all the same, if the reader had all three papers at hand."

Fine, K. 2003: 'The Non-identity of a Material Thing and its Matter' *Mind* 112, pp. 195-234.

Frances, Bryan 2006: 'The New Leibniz's Law Arguments for Pluralism' *Mind* 115, pp. 1007-1022.

King, Jeffrey C. 2006: 'Semantics for Monists'. *Mind* 115, pp. 1023-1058.

23. "In defence of three-dimensionalism," *Journal of Philosophy* 103: 699-714 (2006).

"Much of the work for this paper was done around fifteen years ago in preparation for an as yet unpublished book on the metaphysics of material things. Some of the work was recently presented in a seminar at New York University, a metaphysics workshop at Glasgow University, a talk at the University of Aberdeen, and a conference on Being at the University of Leeds. I should like to thank the participants at those meetings for much helpful discussion; and I am especially grateful to Ruth Chang and Peter Simons for their detailed comments."

Reprinted in: Robin Le Poidevin (ed.) - *Being: developments in contemporary metaphysics* - Cambridge, Cambridge University Press, 2008, pp. 1-16.

24. Relatively unrestricted quantification. In *Absolute generality*. Edited by Rayo Agustin and Uzquiano Gabriel. Oxford: Oxford University Press 2006. pp. 20-44

"There are four broad grounds upon which the intelligibility of quantification over absolutely everything has been questioned—one based upon the existence of semantic indeterminacy, another on the relativity of ontology to a conceptual scheme, a third upon the necessity of sortal restriction, and the last upon the possibility of indefinite extendibility. The argument from semantic indeterminacy derives from general philosophical considerations concerning our understanding of language. For the Skolem-Lowenheim Theorem appears to show that an understanding of quantification over absolutely everything (assuming a suitably infinite domain) is semantically indistinguishable from the understanding of quantification over something less than absolutely everything; the same first-order sentences are true and even the same first-order conditions will be satisfied by objects from the narrower domain. From this it is then argued that the two kinds of understanding are indistinguishable tout court and that nothing could *count* as having the one kind of understanding as opposed to the other.

The second two arguments reject the bare idea of an object as unintelligible, one taking it to require supplementation by reference to a conceptual scheme and the other taking it to require supplementation by reference to a sort. Thus we cannot properly make sense of quantification over *mere* objects, but only over objects of such and such a conceptual scheme or of such and such a sort. The final argument, from indefinite extendibility, rejects the idea of a *completed* totality. For if we take ourselves to be quantifying over all objects, or even over all sets, then the reasoning of

Russell's paradox can be exploited to demonstrate the possibility of quantifying over a more inclusive domain. The intelligibility of absolutely unrestricted quantification, which should be free from such incompleteness, must therefore be rejected.

The ways in which these arguments attempt to undermine the intelligibility of absolutely unrestricted quantification are very different; and each calls for extensive discussion in its own right. However, my primary concern in the present paper is with the issue of indefinite extendibility; and I shall only touch upon the other arguments

in so far as they bear upon this particular issue. I myself am not persuaded by the other arguments and I suspect that, at the end of day, it is only the final argument that will be seen to carry any real force. If there is a case to be made against absolutely unrestricted quantification, then it will rest here, upon logical considerations of extendibility, rather than upon the nature of understanding or the metaphysics of identity."

25. *Semantic relationism*. Oxford: Blackwell 2007.

Contents: Preface VII; Introduction 1; 1. Coordination among variables 6; 2. Coordination within language 33; 3. Coordination within thought 66; 4. Coordination between speakers 86; Postscript: further work 122; Notes 133; References 141; Index 143.

"In this major contribution to the philosophy of language, Kit Fine argues for a fundamentally new approach to the study of representation in language and thought. His key idea is that there may be representational relationships between expressions or elements of thought that are not grounded in the intrinsic representational features of the expressions or elements themselves. This idea is shown to lead to solutions to many of the standard puzzles in the area - Frege's identity puzzle, Kripke's puzzle about belief, and Moore's paradox of analysis. It is also shown to lead to a more defensible form of direct reference theory - one that is immune to many of the objections that the Fregeans have leveled against it."

26. *Coincidence and Form*. 2008.

Notes: Paper read at the Kit Fine Day: Ontology Talks, February 11, 2008, Paris.

"Many philosophers are pluralists about material things. They believe that distinct material things may coincide at a time, i.e. that they may occupy the very same spatial region and be constituted by the very same matter at that time. A familiar example is that of an alloy statue and the piece of alloy from which it is made. They are clearly coincident and they would also appear to be distinct, given that the piece of alloy may exist before the statue is created or after it has been destroyed."

27. *Towards a theory of Part*. 2008.

Notes: Paper read at the Kit Fine Day: Ontology Talks, February 11, 2008, Paris.

"My aim in this paper is to outline a general framework for dealing with questions of part-whole. My approach is very different from the more conventional approaches to the subject. For instead of dealing with the single notion of mereological part or sum, I have attempted to provide a comprehensive and unified account of the different ways in which one object can be a part of another. Thus mereology, as it is usually conceived, will become a relatively small aspect of a much larger subject."

28. *The question of ontology*. In *Metametaphysics: New essays on the foundations of ontology*. Edited by Chalmers David J., Manley David, and Wassermann Ryan. New York: Oxford University Press 2009. pp. 157-177

"There are a number of difficulties with the standard quantificational view. They are for the most part familiar but it will be worth spelling them out, if only to make clear how far removed our understanding of the ontological question is from our understanding of their quantificational counterparts. Philosophers may have learned to live with the disconnect between the two, but their tolerance of the situation should not lull us into thinking that it is tolerable."

"This account of our method for settling ontological dispute requires that we have a grasp not only

of an absolute conception of reality, of there *being nothing more than ...*, but also of a relative conception, of *there being nothing more to ... than ...*, since it is through our assessment of the relative claims that we attempt to adjudicate the plausibility of the absolute claims. Many philosophers seem to have supposed that our having a good working grasp of such notions depends upon our being able to define them in other terms, so that questions of metaphysics or ontology thereby become questions of semantics or epistemology or total science. I consider this to be a serious methodological error: upon careful reflection we can see that our intuitive grasp of these notions is a sufficient guide in itself to their proper employment; and the attempt to define these notions in other terms has served merely to distort our understanding of the metaphysical questions and of the methods by which they are to be resolved."

29. Aristotle's Megarian maneuvers. (*To appear in a volume of recent work on Aristotle*). Edited by White N. Cambridge: Cambridge University Press 2011.

"Towards the end of *Theta*, 4 of the *Metaphysics* (1047b14-b30), Aristotle attempts to establish two modal principles. The passage (with my paragraphing and square bracketing) goes as follows:

[Principle 1] At the same time it is clear that if, when A is B must be, then, when A is possible B also must be possible.

[Argument for Principle 1] For if B need not be possible, there is nothing to prevent its not being possible. Now let A be supposed possible. Then, when A is possible, nothing impossible would follow if A were supposed to be; and then B must of course be. But we supposed B to be impossible. Let it be impossible, then. If, then, B is impossible, A also must be. But A was supposed possible; therefore B is also possible. If then A is possible, B also will be possible, if they were so related that if A is B must be. If, then, A and B being thus related, B is not possible on this condition, A and B will not be related as supposed.

[Principle 2] And if when A is possible B must be possible, then if A is B must also be.

[Argument for Principle 2] For to say that B must be possible if A is possible means that if A is both at the same time when and in the way in which it was supposed capable of being, B also must then and in that way be.

This passage raises severe exegetical problems. One of these problems is that the second principle seems obviously to be incorrect; and so it is not clear why Aristotle would have wanted to endorse it. For suppose that a fair coin is tossed and turns up heads. It is then plausible to maintain that when it is possible that the coin is fair and turns up heads it must be possible that it turn up tails and hence not turn up heads. By the principle it follows that when the coin is fair and turns up heads then it must not turn up heads; and from it follows that it is not true that it is both fair and turns up heads, contrary to our original supposition.

STUDIES ABOUT HIS WORK

1. "The philosophy of Kit Fine," *Dialectica. International Journal of Philosophy* 61: 3-200 (2007). Guest editor: Kevin Mulligan
2. Bergmann Michael, "A new argument from Actualism to Serious Actualism," *Noûs* 30: 356-359 (1996).
"Philosophers such as Kit Fine, Mark Hinchcliff and John Pollock deny that actualism -- the view that necessarily everything that there is exists -- entails serious actualism -- the view that necessarily no object has a property in a world in which it does not exist. I argue, first, that such a denial commits one to the thesis that transworld property exemplification (TPE) is possible. TPE occurs when a property is exemplified in a world W, not by an object in W, but by an object that is in another world W*. Then I argue that TPE is not possible."
3. Cate Balder, "Expressivity of second order propositional modal logic," *Journal of Philosophical Logic* 35: 209-223 (2006).
"We consider second-order propositional modal logic (SOPML), an extension of the basic modal language with propositional quantifiers introduced by Kit Fine in 1970. We determine the precise expressive power of SOPML by giving analogues of the Van Benthem-Rosen theorem and the Goldblatt Thomason theorem. Furthermore, we show that the basic modal language is the

bisimulation invariant fragment of SOPML, and we characterize the bounded fragment of first-order logic as being the intersection of first-order logic and SOPML."

4. Correia Fabrice, "Propositional logic of essence," *Journal of Philosophical Logic* 29: 295-313 (2000).
"This paper presents a propositional version of Kit Fine's (quantified) logic for essentialist statements, provides it with a semantics, and proves the former adequate (i.e. sound and complete) with respect to the latter."
5. Correia Fabrice. *Existential dependence and cognate notions*. München: Philosophia Verlag 2005.
"This is a work in analytic metaphysics. Its main purpose is to clarify a notion of central importance in metaphysics since Aristotle, to wit the notion of existential dependence. All currently available analyses of the notion are examined and then rejected, and a new account is defended. This work is the first comprehensive one on the topic. The first chapter is devoted to introducing and explaining some notions which are crucial for the central parts of the work, namely the notions of existence, necessity, (individual and plural) quantification and essence. In chapters 2 and 4 focus is made on the relation of " simple" existential dependence, the relation which holds between two objects when the first cannot exist without the other. Three accounts of simple dependence - each endorsed by some contemporary philosophers, among them Kit Fine, E. Jonathan Lowe, Kevin Mulligan, Peter Simons and Barry Smith - are presented and then rejected. A new account, inspired by suggestions by Fine and Lowe, is defended. According to that account - the " foundational" account - simple dependence is to be defined in terms of a relation called *grounding*, which is presented in chapter 3. Chapters 5 and 6 deal with relations belonging to the family of simple dependence, among others (i) generic dependence, (ii) various forms of temporal dependence, and (iii) supervenience, a complex dependence relation largely invoked in current debates on the philosophy of mind. It is shown that foundationalist accounts of these notions - i.e. accounts framed in terms of grounding - are superior to other existing accounts. These chapters also contain some applications of the foundational conception of dependence, in particular a characterization of substances and a formulation of the distinction between two well known conceptions of universals, the Aristotelian and the Platonician conception. The last part of the work is a technical appendix where one can find, among other things, a system for the logic of essence, which is proved to be sound and complete with respect to a possible world semantics."
6. Frances Bryan, "The new Leibniz' Law arguments for pluralism," *Mind* 115: 1007-1022 (2006).
"For years philosophers argued for the existence of distinct yet materially coincident things by appealing to modal and temporal properties. For instance, the statue was made on Monday and could not survive being flattened; the lump of clay was made months before and can survive flattening. Such arguments have been thoroughly examined. Kit Fine has proposed a new set of arguments using the same template. I offer a critical evaluation of what I take to be his central lines of reasoning."
7. Gorman Michael, "The essential and the accidental," *Ratio* 18: 276-289 (2005).
"The distinction between the essential and the accidental is nearly always understood in modal terms. After criticizing some recent writings by Kit Fine that question that understanding, I develop a theory according to which whether a given feature of a thing is essential turns on whether it is explained by other features of that thing. The theory differs from the modal view by leaving room for features that are accidental even though their bearers cannot exist without them. The theory has the additional advantage of being open to the results of scientific theory."
8. Hinzen W., "Constructive versus ontological construals of Cantorian ordinals," *History and Philosophy of Logic* 24: 45-63 (2003).
"In a recent paper, Kit Fine offers a reconstruction of Cantor's theory of ordinals. It avoids certain mentalistic overtones in it through both a non-standard ontology and a non-standard notion of abstraction. I argue that this reconstruction misses an essential constructive and computational content of Cantor's theory, which I in turn reconstruct using Martin-Löf's theory of types. Throughout, I emphasize Kantian themes in Cantor's epistemology, and I also argue, as against Michael Hallett's interpretation, for the need for a constructive understanding of Cantorian 'existence principles'."
9. Hudson Hud, "On a new argument from Actualism to Serious Actualism," *Noûs* 31: 520-524 (1997).

"In a recent "Nous" article, Michael Bergmann follows Alvin Plantinga in arguing that actualism -- the view that necessarily, everything that there is exists -- entails serious actualism -- the view that necessarily, no object has a property in a world in which it does not exist. Bergmann attempts (i) to show that the denial of this entailment thesis commits one to the possibility of transworld property exemplification (TPE), and (ii) to show that (TPE) is impossible.

I argue that Bergmann establishes (i) but not (ii) against his opponents in the literature, who include Kit Fine, John Pollock, and Mark Hinchliff."

10. King Jeffrey C., "Instantial terms, anaphora and arbitrary objects," *Philosophical Studies*: 239-265 (1991).

"In a number of recent works, Kit Fine has argued that instancial terms in applications of UG (Universal Generalization) and EI (Existential Instantiation), some uses of variables in mathematics, and some anaphoric pronouns refer to arbitrary objects. The author contrasts Fine's view with his own view according to which such expressions are context dependent quantifiers: quantifiers some of whose semantics features are determined by their linguistic contexts."

11. King Jeffrey C., "Semantics for monists," *Mind* 115: 1023-1058 (2006).

"Assume that the only thing before you is a statue made of some alloy. Call those who think that there is one thing before you in such a case monists. Call those who think there are at least two things before you in such a case pluralists. The most common arguments for pluralism run as follows. The statue is claimed to have some property P that the piece of alloy lacks (or vice versa), and hence it is concluded that they are distinct. Most often, the predicates employed in such arguments to express the crucial property are predicates expressing 'temporal properties', such as existing at a certain time; or 'modal properties', such as possibly being spherical; or 'constitution properties', such as being made of a certain sort of material. In a recent paper, Kit Fine has noted that such predicates suffer from various defects that make it possible for the monist to plausibly resist the relevant versions of the pluralist's arguments. For this reason, Fine considers a number of predicates that do not suffer from these defects, and constructs new versions of the above argument using them. Fine argues that any attempt on the monist's part to resist his versions of the argument force the monist to adopt implausible positions in the philosophy of language. As against this, I argue that the monist has perfectly plausible responses to Fine's arguments that require the monist to adopt only quite reasonable positions in the philosophy of language."

12. Kremer Philip, "Relevant predication: grammatical characterisations," *Journal of Philosophical Logic* 18: 349-382 (1989).

"This paper reformulates and decides a certain conjecture in Dunn's *Relevant Predication 1: The Formal Theory* (Journal of Philosophical Logic 16, 347-381, 1987). This conjecture of Dunn's relates his object-language characterisation of a property's being relevant in a variable x to certain grammatical characterisations of relevance, analogous to some given by Helman, in *Relevant Implication and Relevant Functions* (in *Entailment: The Logic of Relevance and Necessity*, vol. 2, by Alan Ross Anderson, Nuel Belnap, and J. Michael Dunn et al.) In the course of the investigation this paper also investigates Kit Fine's semantics for quantified relevance logics, which appears in his appropriately titled *Semantics for Quantified Relevance Logic*."

13. Rieber Steven, "A defense of indeterminism," *Acta Analytica* 17: 75-82 (2002).

"My goal is to defend the indeterminist approach to vagueness, according to which a borderline vague utterance is neither true nor false. Indeterminism appears to contradict bivalence and the disquotational schema for truth. I agree that indeterminism compels us to modify each of these principles. Kit Fine has defended indeterminism by claiming that ordinary ambiguous sentences are neither true nor false when one disambiguation is true and the other is false. But even if Fine is right about sentences, his point does not seem to generalize the utterances. What the indeterminist needs -- and what ordinary ambiguity does not provide -- is an ambiguous utterance where what is being said is indeterminate between two different propositions. I will show that such cases exist. These cases imply that the modifications that indeterminism makes to bivalence and the disquotational schema are required independently of indeterminism, in fact independently of vagueness."

14. Shapiro Stewart, "The nature and limits of abstractio," *Philosophical Quarterly* 54: 166-174 (2004).

"This article is an extended critical study of Kit Fine's *The Limits of Abstraction*, which is a sustained attempt to take the measure of the neo-logicist program in the philosophy and foundations

of mathematics, founded on abstraction principles like Hume's principle.

The present article covers the philosophical and technical aspects of Fine's deep and penetrating study."

15. Shapiro Stewart, "Sets and abstracts – Discussion," *Philosophical Studies* 122: 315-322 (2005).
"The purpose of this article is to explore the bearing of the model-theoretic results in Kit Fine's *The Limits of Abstraction* to the philosophical goals of neologicism. The opening section analyzes particular results concerning abstraction principles, indicating consequences for acceptability of the neologist program, at least as that program is articulated in the Fine study. The second section explores the role of set-theoretic metatheory generally in foundational programs like that of neologicism (and logicism). What is an advocate of neologicism, or a neutral outsider, to make of the whole enterprise of model theory as based on set theory? What is a mathematician watching the neologist development from the outside to make of neologicism?"
16. Simons Peter. Modes of extension: comments on Kit Fine's 'In defence of three-dimensionalism'. In *Being: developments in contemporary metaphysics*. Edited by Le Poidevin Robin. Cambridge: Cambridge University Press 2008. pp. 17-22
17. Suster Danilo, "The modality principle and work-relativity of modality," *Acta Analytica* 20: 41-52 (2005).
"Davies argues that the ontology of artworks as performances offers a principled way of explaining work-relativity of modality. Object oriented contextualist ontologies of art (Levinson) cannot adequately address the problem of work-relativity of modal properties because they understand looseness in what counts as the same context as a view that slight differences in the work-constitutive features of provenance are work-relative. I argue that it is more in the spirit of contextualism to understand looseness as context-dependent. Davies also appeals to the modality principle -- an entity's essential properties are all and only its constitutive properties. Davies understands essentiality in a traditional way: a property P is an essential property of an object *o* iff *o* could not exist and lack P. Kit Fine has recently made a convincing case for the view that the notion of essence is not to be understood in modal terms. I explore some of the implications of this view for Davies's modal argument for the performance theory."
18. Tappenden Jamie, "On Kit Fine's *The Limits of Abstraction* – Discussion," *Philosophical Studies* 122: 349-366 (2007).
19. Wedgwood Ralph, "The essence of response-dependence," *European Review of Philosophy* 3: 31-54 (1998).
"Many philosophers appeal to "response-dependence" to capture a distinction between certain "less objective" properties (say, values or secondary qualities) and other "more objective" properties (like primary qualities or natural kinds). However, the ways in which Mark Johnston, Philip Pettit, and Crispin Wright have characterized the notion of "response-dependence" cannot capture this distinction, since their characterizations focus on concepts rather than on the properties themselves. The right way to capture this distinction is by characterizing "response-dependence" in terms of the essence of these properties, understanding "essence" in roughly the way that has been proposed by Kit Fine."
20. Wir Alan, "On Kit Fine's *The Limits of Abstraction* – Discussion," *Philosophical Studies* 122: 333-348 (2005).
"I ask whether the 'general theory of abstraction' Kit Fine develops in this book can answer some of the problems he and others have found in neologicism as a philosophy of mathematics, answering in the negative.
Among the problems are whether the general theory of abstraction enables one to derive mathematics from an ontologically unproblematic logical basis and whether it resolves the 'embarrassment of riches' problem that too many, pairwise inconsistent, theories can be legitimated using it as framework. I finish with some remarks on realism and relativism as they figure in Fine's book."

PUBLICATIONS AVAILABLE ON LINE (in PDF format)

Kit Fine's Personal Page at the New York University:

- Essence and modality (1994)
- A puzzle concerning matter and form (1994)
- Cantorian abstraction: a defense and reconstruction (1994)
- The problem of Possibilia (2003)
- The non-identity of a material thing and its matter (2003)
- The role of variables (2003)
- The varieties of necessity (2005) - Chapter 7 of *Modality and tense*
- Tense and reality (2005) - Chapter 8 of *Modality and tense*
- The reality of tense (2006)
- Our knowledge of mathematical objects (2006)
- Arguing for non-identity: a response to King and Frances (2006)
- Relatively unrestricted quantification (2006)
- The question of ontology (2009)
- Aristotle's Megarian maneuvers (2007, not yet published)

Project Euclid - Four articles by Kit Fine published in the Notre Dame Journal of Formal Logic

- In so many possible worlds - Vol. 13 (1972), no. 4, 516-520
- For so many individuals - Vol. 13 (1972), no. 4, 569-572
- Normal forms in modal logic - Vol. 16 (1975), no. 2, 229-237
- Analytic implication - Vol. 27 (1986), no. 2, 169-179

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